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Continuity Information for 09/913322

Parent Data

09913322

is a national stage entry of PCT/CN00/00010 International Filing Date: **01/21/2000**

Child Data

No Child Data

Appln Info	Contents	Petition Info	Atty/Agent Info	Continuity Data	Foreign Data	Invento
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Priority#	Date	Country
99103588.7	04/05/1999	CHINA
99102823..6	03/12/1999	CHINA
99100722.0	02/11/1999	CHINA
99100721.2	02/11/1999	CHINA

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Day : Wednesday
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Inventor Name Search Result

Your Search was:

Last Name = YE

First Name = WENCAI

Application#	Patent#	Status	Date Filed	Title	Inventor Name
09913322	Not Issued	030	01/15/2002	NOVEL GYMNEMIC ACID DERIVATIVES PROCESS FOR THE PREPARATION THEREOF AND USE THEREOF AS MEDICINE	YE, WENCAI

Inventor Search Completed: No Records to Display.

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Day : Wednesday
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Inventor Name Search Result

Your Search was:

Last Name = DAI

First Name = YUE

Application#	Patent#	Status	Date Filed	Title	Inventor Name
09913322	Not Issued	030	01/15/2002	NOVEL GYMNEMIC ACID DERIVATIVES PROCESS FOR THE PREPARATION THEREOF AND USE THEREOF AS MEDICINE	DAI, YUE

Inventor Search Completed: No Records to Display.

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Day : Wednesday
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 PALM INTRANET**Inventor Name Search Result**

Your Search was:

Last Name = CONG

First Name = XIADONG

Application#	Patent#	Status	Date Filed	Title	Inventor Name
09913322	Not Issued	030	01/15/2002	NOVEL GYMNEMIC ACID DERIVATIVES PROCESS FOR THE PREPARATION THEREOF AND USE THEREOF AS MEDICINE	CONG, XIADONG

Inventor Search Completed: No Records to Display.

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 PALM INTRANET**Inventor Name Search Result**

Your Search was:

Last Name = ZHU

First Name = XINGXIANG

Application#	Patent#	Status	Date Filed	Title	Inventor Name
09913322	Not Issued	030	01/15/2002	NOVEL GYMNEMIC ACID DERIVATIVES PROCESS FOR THE PREPARATION THEREOF AND USE THEREOF AS MEDICINE	ZHU, XINGXIANG

Inventor Search Completed: No Records to Display.

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 PALM INTRANET

Day : Wednesday
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Inventor Name Search Result

Your Search was:

Last Name = ZHAO

First Name = SHOUXUN

Application#	Patent#	Status	Date Filed	Title	Inventor Name
09913322	Not Issued	030	01/15/2002	NOVEL GYMNEMIC ACID DERIVATIVES PROCESS FOR THE PREPARATION THEREOF AND USE THEREOF AS MEDICINE	ZHAO, SHOUXUN

Inventor Search Completed: No Records to Display.

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Inventor

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SHOUXUN

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PALM INTRANET**Attorney/Agent Information for 09/913322**

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BAILEY, JOHNNY W.	32881 (Agent)	(703)241-1300
DALEY, DONALD	34313 (Attorney)	(703)390-3030

Appln Info	Contents	Petition Info	Atty/Agent Info	Continuity Data	Foreign Data	Inventor
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L2 24 L1 AND DERIVATI?

=> s l2 and composition
34 FILES SEARCHED...
L3 3 L2 AND COMPOSITION

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L3 ANSWER 1 OF 3 CABA COPYRIGHT 2002 CAB
AN 95:101648 CABA
DN 950307676
TI Antisweet natural products. IX. Structures of **gymnemic** acids
XV-XVIII from Gymnema sylvestre R. Br. V
AU Yoshikawa, K.; Kondo, Y.; Arihara, S.; Matsuura, K.
CS Faculty of Pharmaceutical Sciences, Tokushima Bunri University,
Yamashiro-cho, Tokushima 770, Japan.
SO Chemical and Pharmaceutical Bulletin, (1993) Vol. 41, No. 10, pp.
1730-1732. 6 ref.
ISSN: 0009-2363
DT Journal
LA English

AB These 4 new saponins, which at 0.5 mM completely suppressed the sweetness

of 0.4 M sucrose, were isolated as antisweet substances from an ethanolic extract of leaves of *G. sylvestre*. Their structures were elucidated by spectral and chemical studies to be the following **derivatives** of 3-O- beta -D-glucuronopyranosyl-gymnemagenin: XV, 21-O-2-methylbutyryl-22-O-2-methylcrotonyl; XVI, 16,22-O-bis-2-methylcrotonyl; XVII, 21-O-benzoyl; XVIII, 28-O-benzoyl. The compounds designated **gymnemic acids** VIII and IX in a previous paper of this series [Ibid. (1992) 40 1779-] were renamed **gymnemic acids** XIII and XIV, since these names had already been assigned to other compounds by other authors [Ibid. (1992) 40 1366-].

L3 ANSWER 2 OF 3 CABA COPYRIGHT 2002 CAB
AN 94:84127 CABA
DN 940307200
TI Antisweet natural products. V. Structures of **gymnemic acids** VIII-XII from *Gymnema sylvestre* R. Br
AU Yoshikawa, K.; Nakagawa, M.; Yamamoto, R.; Arihara, S.; Matsuura, K.
CS Faculty of Pharmaceutical Sciences, Tokushima-Bunri University,
Tokushima-shi, Tokushima 770, Japan.
SO Chemical and Pharmaceutical Bulletin, (1992) Vol. 40, No. 7, pp.
1779-1782. 7 ref.
ISSN: 0009-2363
DT Journal
LA English
AB Five oleanane-type triterpenoid saponins, named **gymnemic acids** VIII-XII, were isolated as the antisweet principles from the ethanol extract of the dried leaves of *Gymnea sylvestre*, supplied by Teikoku Seiyaku Co., Japan. Based on spectral and chemical analyses, their structures were identified as glucosideuronic acid **derivatives** of gymnemagenin acylated with acetyl, tigloyl and/or 2-methylbutyroyl moieties. It is suggested that the antisweet activity of the saponins is increased by an increased number of acyl groups.

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS
AN 2000:573807 CAPLUS
DN 133:174718
TI Isolation of novel **gymnemic acid derivatives** from *Gymnema sylvestre* R. Br in prevention or treatment of disorders related to high blood sugar, high blood lipids, or blood clotting
IN Ye, Wencai; Dai, Yue; Cong, Xiaodong; Zhu, Xingxiang; Zhao, Shouxun
PA Shandong Luye Pharmaceutical Co., Ltd., Peop. Rep. China
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent
LA Chinese
FAN.CNT 1

Priority Feb 11, 1999

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI	WO 2000047594	A1	20000817	WO 2000-CN10	20000121	<i>in stand-</i>
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	CN 1266686	A	20000920	CN 1999-102823	19990312	
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	EP 1176149	A1	20020130	EP 2000-901035	20000121	
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CN 1999-100722	A	19990211	
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WO 2000-CN10	W	20000121	

GI

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AB Title compds. [I; R = COOH; Q; R1 = H, OCOC₆H₅; R2 = COOR₅, CH₂OH; R3 = H, sugar; R4 = H, OH; R5 = sugar] are isolated from *Gymnema sylvestre* R. Br using n-butanol. Title compds., pharmaceutical acceptable salts, and **compn.** contg. title compds. are useful in prevention or treatment of disorders related to high blood sugar, high blood lipids, or blood clotting. Thus, the title compd. II was obtained and tested in KunMing mouse for inhibition of glucose-concn.-elevation in blood.

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 AN 5715715 BABS
 TI Antisweet Natural Products. V. Structures of **Gymnemic** Acids VIII-XII from *Gymnema sylvestre* R. BR.
 AU Yoshikawa, Kazuko; Nakagawa, Miki; Yamamoto, Ryouko; Arihara, Shigenobu; Matsuura, Kouji
 SO Chem.Pharm.Bull. (1992), 40(7), 1779-1782
 CODEN: CPBTAL
 DT Journal
 LA English
 SL English
 AN 5715715 BABS
 AB Five oleanane-type triterpenoid saponins, **gymnemic** acids VIII-XII as antisweet principles were isolated from the leaves of *Gymnema sylvestre* (Asclepiadaceae). Their structures were established on the basis of spectral and chemical evidence. They were characterized as glucosideuronic acid **derivatives** of gymnemagenin acylated with acetyl, tigloyl and/or 2-methylbutyroyl moieties.

L2 ANSWER 2 OF 24 BABS COPYRIGHT 2002 BEILSTEIN CDS MDLI
 AN 5706996 BABS
 TI Isolation and Structure Elucidation of **Gymnemic** Acids, Antisweet Principles of *Gymnema sylvestre*
 AU Liu, Hong-Min; Kiuchi, Fumiayuki; Tsuda, Yoshisuke
 SO Chem.Pharm.Bull. (1992), 40(6), 1366-1375
 CODEN: CPBTAL
 DT Journal
 LA English
 SL English
 AN 5706996 BABS
 AB The structure of gymnemagenin (3 β ,16 β ,21 β ,22 α ,23,28-hexahydroxy-olean-12-ene), the sapogenin of the antisweet principles of *Gymnema sylvestre*, was established by X-ray analysis of the 3 β ,23;21 β ,22 α -di-O-isopropylidene **derivative**. On the basis of this result, the structure of deacylgymnemic acid was elucidated as the 3-O- β -glucuronide from the carbon-13 nuclear magnetic resonance spectra. Five antisweet principles, **gymnemic** acid-III, -IV, -V, -VIII, and -IX, were

isolated in pure states from the hot water extract of leaves of *Gymnema sylvestre*. Of these, three (GA-III, -IV, and -V) were known, while two (GA-VIII and -IX) were new compounds. The structures of GA-VIII and -IX were elucidated as 3'-O- β -D-arabino-2-hexulopyranosyl **gymnemic** acid-III and -IV, respectively.

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DN 950307676
TI Antisweet natural products. IX. Structures of **gymnemic** acids XV-XVIII from *Gymnema sylvestre* R. Br. V
AU Yoshikawa, K.; Kondo, Y.; Arihara, S.; Matsuura, K.
CS Faculty of Pharmaceutical Sciences, Tokushima Bunri University, Yamashiro-cho, Tokushima 770, Japan.
SO Chemical and Pharmaceutical Bulletin, (1993) Vol. 41, No. 10, pp. 1730-1732. 6 ref.
ISSN: 0009-2363
DT Journal
LA English
AB These 4 new saponins, which at 0.5 mM completely suppressed the sweetness of 0.4 M sucrose, were isolated as antisweet substances from an ethanolic extract of leaves of *G. sylvestre*. Their structures were elucidated by spectral and chemical studies to be the following **derivatives** of 3-O- beta -D-glucuronopyranosyl-gymnemagenin: XV, 21-O-2-methylbutyryl-22-O-2-methylcrotonyl; XVI, 16,22-O-bis-2-methylcrotonyl; XVII, 21-O-benzoyl; XVIII, 28-O-benzoyl. The compounds designated **gymnemic** acids VIII and IX in a previous paper of this series [Ibid. (1992) 40 1779-] were renamed **gymnemic** acids XIII and XIV, since these names had already been assigned to other compounds by other authors [Ibid. (1992) 40 1366-].

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DN 940307200
TI Antisweet natural products. V. Structures of **gymnemic** acids VIII-XII from *Gymnema sylvestre* R. Br
AU Yoshikawa, K.; Nakagawa, M.; Yamamoto, R.; Arihara, S.; Matsuura, K.
CS Faculty of Pharmaceutical Sciences, Tokushima-Bunri University, Tokushima-shi, Tokushima 770, Japan.
SO Chemical and Pharmaceutical Bulletin, (1992) Vol. 40, No. 7, pp. 1779-1782. 7 ref.
ISSN: 0009-2363
DT Journal
LA English
AB Five oleanane-type triterpenoid saponins, named **gymnemic** acids VIII-XII, were isolated as the antisweet principles from the ethanol extract of the dried leaves of *Gymnea sylvestre*, supplied by Teikoku Seiyaku Co., Japan. Based on spectral and chemical analyses, their structures were identified as glucosideuronic acid **derivatives** of gymnemagenin acylated with acetyl, tigloyl and/or 2-methylbutyroyl moieties. It is suggested that the antisweet activity of the saponins is increased by an increased number of acyl groups.

L2 ANSWER 5 OF 24 CAPLUS COPYRIGHT 2002 ACS
AN 2000:573807 CAPLUS
DN 133:174718
TI Isolation of novel **gymnemic** acid **derivatives** from *Gymnema sylvestre* R. Br in prevention or treatment of disorders related to high blood sugar, high blood lipids, or blood clotting
IN Ye, Wencai; Dai, Yue; Cong, Xiaodong; Zhu, Xingxiang; Zhao, Shouxun
PA Shandong Luye Pharmaceutical Co., Ltd., Peop. Rep. China
SO PCT Int. Appl., 33 pp.
CODEN: PIXXD2
DT Patent

LA Chinese

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000047594	A1	20000817	WO 2000-CN10	20000121
	W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
	CN 1263102	A	20000816	CN 1999-100721	19990211
	CN 1263105	A	20000816	CN 1999-100722	19990211
	CN 1266686	A	20000920	CN 1999-102823	19990312
	CN 1268515	A	20001004	CN 1999-103588	19990405
	EP 1176149	A1	20020130	EP 2000-901035	20000121
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
	JP 2002536454	T2	20021029	JP 2000-598513	20000121
PRAI	CN 1999-100721	A	19990211		
	CN 1999-100722	A	19990211		
	CN 1999-102823	A	19990312		
	CN 1999-103588	A	19990405		
	WO 2000-CN10	W	20000121		

GI

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

AB Title compds. [I; R = COOH; Q; R1 = H, OCOC₆H₅; R2 = COOR₅, CH₂OH; R3 = H, sugar; R4 = H, OH; R5 = sugar] are isolated from *Gymnema sylvestre* R. Br using n-butanol. Title compds., pharmaceutical acceptable salts, and compn. contg. title compds. are useful in prevention or treatment of disorders related to high blood sugar, high blood lipids, or blood clotting. Thus, the title compd. II was obtained and tested in KunMing mouse for inhibition of glucose-concn.-elevation in blood.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 6 OF 24 CAPLUS COPYRIGHT 2002 ACS
AN 1999:355571 CAPLUS
DN 130:351486

TI Sweetness-modifying compounds in beverages
IN Blumenstein-Stahl, Gabriele Annemarie; Olbert, Ingeborg; Fischer, Christa Maria

PA The Procter + Gamble Company, USA

SO Eur. Pat. Appl., 9 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 919139	A1	19990602	EP 1997-121088	19971201
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				←
	CA 2322832	AA	19990610	CA 1998-2322832	19981201
	WO 9927804	A1	19990610	WO 1998-US25444	19981201
	W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ,				

CZ, DE, DE, DK, DK, EE, EE, ES, FI, FI, GB, GE, GH, GM, HR, HU,
ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV,
MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
SK, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ,
BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES,
FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI,
CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
AU 9915403 A1 19990616 AU 1999-15403 19981201
EP 1041898 A1 20001011 EP 1998-959645 19981201
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI
JP 2001524328 T2 20011204 JP 2000-522806 19981201
PRAI EP 1997-121088 A 19971201
WO 1998-US25444 W 19981201
AB Alc.-free beverages are prep'd. with a sweetener system that ensures the full perception of the flavor while at the same time contg. a sweetness-modifying material that reduces the overall sweetness. Such beverages are very appealing to an adult taste but are less sweet than conventional beverages usually designed for children, since children prefer a stronger sweetness impression. Thus, to a model 8% sucrose soln., green tea with sweetness-modifying compds. (flavanol level 124 ppm) is added to depress sweetness, while raising bitter and astringent impressions only moderately.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 7 OF 24 CAPLUS COPYRIGHT 2002 ACS
AN 1998:332170 CAPLUS
DN 129:66935
TI Gymnema sylvestre (**gymnemic** acids) and prevention of diabetes mellitus
AU Miyamoto, Susumu; Ueno, Gaku
CS Dainippon Meiji Sugar Co., Ltd., Japan
SO Food Style 21 (1998), 2(5), 42-46 ←
CODEN: FSTYFF
PB Shokuhin Kagaku Shinbunsha
DT Journal; General Review
LA Japanese
AB A review with 20 refs.

L2 ANSWER 8 OF 24 CAPLUS COPYRIGHT 2002 ACS
AN 1997:337310 CAPLUS
DN 126:338669
TI Suppression of glucose absorption by some fractions extracted from *Gymnema sylvestre* leaves
AU Shimizu, Kazumasa; Iino, Akira; Nakajima, Junji; Tanaka, Katsunori; Nakajyo, Shinjiro; Urakawa, Norimoto; Atsuchi, Mikito; Wada, Tamaki; Yamashita, Chiaki
CS Division of Veterinary Pharmacology, Nippon Veterinary and Animal Science University, Musashino, 180, Japan
SO Journal of Veterinary Medical Science (1997), 59(4), 245-251 ←
CODEN: JVMSEQ; ISSN: 0916-7250
PB Japanese Society of Veterinary Science
DT Journal
LA English
AB Nine fractions contg. **gymnemic** acids, extd. from the leaves of *G. sylvestre*, were evaluated for their effects on various aspects of glucose transport in guinea pigs and rats. Some of the fractions had hypoglycemic activity, and expts. suggested that they did so by inhibiting glucose uptake in the intestine.

L2 ANSWER 9 OF 24 CAPLUS COPYRIGHT 2002 ACS
AN 1996:453833 CAPLUS
DN 125:123413

TI Bioactive **gymnemic** acids and congeners from *Gymnema sylvestre*
AU Mahato, Shashi B.
CS Indian Inst. Chem. Biol., Calcutta, 700 032, India
SO Studies in Natural Products Chemistry (1996), 18(Stereoselective Synthesis
(Part K)), 649-676 ←
CODEN: SNPCE2
PB Elsevier
DT Journal
LA English
AB Isolation and structures of saponins and sapogenins from *G. sylvestre* are
discussed.

L2 ANSWER 10 OF 24 CAPLUS COPYRIGHT 2002 ACS
AN 1993:251412 CAPLUS
DN 118:251412
TI Antisweet natural products. V. Structures of **gymnemic** acids
VIII-XII from *Gymnema sylvestre* R. Br
AU Yoshikawa, Kazuko; Nakagawa, Miki; Yamamoto, Ryouko; Arihara, Shigenobu;
Matsuura, Kouji
CS Fac. Pharm. Sci., Tokushima-Bunri Univ., Tokushima, 770, Japan
SO Chemical & Pharmaceutical Bulletin (1992), 40(7), 1779-82
CODEN: CPBTAL; ISSN: 0009-2363
DT Journal
LA English
AB Five oleanane-type triterpenoid saponins, **gymnemic** acids
VIII-XII as antisweet principles were isolated from the leaves of *G. sylvestre* (Asclepiadaceae). Their structures were established on the basis of spectral and chem. evidence. They were characterized as glucosideuronic acid **derivs.** of gymnemagenin acylated with acetyl, tigloyl and/or 2-methylbutyroyl moieties.

L2 ANSWER 11 OF 24 CAPLUS COPYRIGHT 2002 ACS
AN 1992:588249 CAPLUS
DN 117:188249
TI Isolation and structure elucidation of **gymnemic** acids, antisweet
principles of *Gymnema sylvestre*
AU Liu, Hong Min; Kiuchi, Fumiaki; Tsuda, Yoshisuke
CS Fac. Pharm. Sci., Kanazawa Univ., Kanazawa, 920, Japan
SO Chemical & Pharmaceutical Bulletin (1992), 40(6), 1366-75
CODEN: CPBTAL; ISSN: 0009-2363
DT Journal
LA English
AB The structure of gymnemagenin (3. β .,16. β .,21. β .,22. α .,23,28-hexahydroxyolean-12-ene), the sapogenin of the antisweet principles of *Gymnema sylvestre*, was established by x-ray anal. of the 3. β .,23;21. β .,22. α .-di-O-isopropylidene **deriv.** On the basis of this result, the structure of deacylgymnemic acid was elucidated as the 3-O- β -glucuronide from carbon-13 NMR spectra. Five antisweet principles, **gymnemic** acid III, IV, V, VIII, and IX, were isolated in pure states from the hot water ext. of leaves of *G. sylvestre*. Of these, three (GA III, IV, and V) were known, while two (GA VIII and IX) were new compds. The structures of GA VIII and IX were elucidated as 3'-O- β -D-arabino-2-hexulopyranosyl **gymnemic** acid III and IV, resp.

L2 ANSWER 12 OF 24 CAPLUS COPYRIGHT 2002 ACS
AN 1991:183992 CAPLUS
DN 114:183992
TI Taste improvement of extracts from the leaves of *Gymnema sylvestre*
AU Nagaoka, Teruko; Hane, Hiroshi; Yamashita, Humio; Kensho, Ituo
CS Dai-Nippon Sugar Manuf. Co., Ltd., Tokyo, 100, Japan
SO Seito Gijutsu Kenkyu Kaishi (1990), 38, 61-70
CODEN: SGIKA6; ISSN: 0370-9841
DT Journal

LA Japanese
AB To reduce the bitterness and antisweet character of **gymnemic** acid (GA), a mixt. of starch and GA was treated with cyclomaltodextrin glucanotransferase. As a result, the bitterness disappeared and the antisweet activity was weakened 15-fold, in suitable conditions. Addn. of .gamma.-cyclodextrin to GA samples was effective in removing the bitterness and antisweet activity. Addn. of glycosyl-steviate GA also restored the sweetness.

L2 ANSWER 13 OF 24 CAPLUS COPYRIGHT 2002 ACS
AN 1989:474808 CAPLUS
DN 111:74808
TI Studies on taste modifiers. II. Purification and structure determination of **gymnemic** acids, antisweet active principle from *Gymnema sylvestre* leaves
AU Maeda, Morihiko; Iwashita, Takashi; Kurihara, Yoshie
CS Fac. Educ., Yokohama Natl. Univ., Yokohama, 240, Japan
SO Tetrahedron Letters (1989), 30(12), 1547-50 ← ✓
CODEN: TELEAY; ISSN: 0040-4039
DT Journal
LA English
AB Two major active **gymnemic** acid components were isolated in pure state from *G. sylvestre* leaves. Their chem. structures were established as 3. β .,16. β .,21. β .,22. α .,23,28-hexahydroxyolean-12-ene D-glucuronide which is esterified with tiglic acid or 2-methylbutyric acid at the 21-C hydroxy group, resp. The antisweet activity of these compds. is discussed in relation to their structures.

L2 ANSWER 14 OF 24 CAPLUS COPYRIGHT 2002 ACS
AN 1974:116652 CAPLUS
DN 80:116652
TI Antiviral activity of triterpenoid saponins containing acylated . β -amyrin aglycones
AU Rao, G. Subha; Sinsheimer, Joseph E.; Cochran, Kenneth W.
CS Coll. Pharm., Univ. Michigan, Ann Arbor, Mich., USA
SO J. Pharm. Sci. (1974), 63(3), 471-3
CODEN: JPMSAE
DT Journal
LA English
AB The **gymnemic** acids, their **derivs.**, and other structurally related triterpenoid saponins differed in their in vitro antiviral activity for influenza A2 virus. Structure-antiviral activity relations were discussed for the triterpenoid saponins contg. the . β -amyrin skeleton. The mechanism of antiviral action was also discussed briefly.

L2 ANSWER 15 OF 24 CAPLUS COPYRIGHT 2002 ACS
AN 1971:115832 CAPLUS
DN 74:115832
TI Constituents from *Gymnema sylvestre* leaves. VIII. Isolation, chemistry, and **derivatives** of gymnemagenin and gymnestrogenin
AU Rao, Gopal Subba; Sinsheimer, Joseph E.
CS Coll. Pharm., Univ. Michigan, Ann Arbor, Mich., USA
SO J. Pharm. Sci. (1971), 60(2), 190-3 ← RSI, 558
CODEN: JPMSAE
DT Journal
LA English
AB Isolation of cryst. gymnemagenin and gymnestrogenin directly from the leaves of *G. sylvestre*, together with prepn. of various **derivs.** of the two aglycones, is described.

L2 ANSWER 16 OF 24 CAPLUS COPYRIGHT 2002 ACS
AN 1970:442374 CAPLUS
DN 73:42374

- TI Constituents from *Gymnema sylvestre* leaves. VI. Acylated genins of the **gymnemic** acids. Isolation and preliminary characterization
AU Sinsheimer, Joseph E.; Rao, G. Subba
CS Coll. of Pharm., Univ. of Michigan, Ann Arbor, Mich., USA
SO J. Pharm. Sci. (1970), 59(5), 629-32 ←
CODEN: JPMSAE
DT Journal
LA English
AB With the aid of a selective enzyme system, genins G, K, N, and *gymnestrogenin* were isolated and shown to be the aglycons of **gymnemic** acids A-D, resp. Genin G was an acylated **deriv**. of *gymnemagenin*, contg. formic, acetic, isovaleric, and tiglic acids, while genin K differed from G by the absence of the HOAc residue. Genin N was *gymnestrogenin* tiglate. Genin J, probably an artifact originating from genin G, was also isolated and indicated to be *gymnemagenin* esterified with acetic, isovaleric, and tiglic acids. The sugar moieties of acids A and B are not acylated, while those of acids C and D are esterified with ferulic acid.
- L2 ANSWER 17 OF 24 CAPLUS COPYRIGHT 2002 ACS
AN 1969:435991 CAPLUS
DN 71:35991
TI Antisweet activity of **gymnemic** acid A1 and its **derivatives**
AU Kurihara, Yoshie
CS Florida State Univ., Tallahassee, Fla., USA
SO Life Sci. (1969), 8(9), 537-43 ←
CODEN: LIFSAK
DT Journal
LA English
AB **Gymnemic** acid A1 (I), a main component of **gymnemic** acid A isolated from *Gymnema sylvestre* leaves, was converted into **gymnemic** acid A2 (II) and finally into **gymnemic** acid A3 (III) by alk. hydrolysis. Acids esterified in the genin of II were 1 mole of HOAc, 2 moles of isovaleric acid, and 1 mole of tiglic acid. The antisweet activity of II (held in the mouth) was <20% of that of I. III did not show any antisweet activity. The sweet taste of 0.025M Na cyclamate, 0.025M D-tryptophan, 0.076M D-leucine, 0.038M BeCl₂, and 0.076M Pb acetate was suppressed by 10-3M II; the sweet taste of CHCl₃ was not suppressed. II was obtained by extn. of 1 kg. of dried leaves of *G. sylvestre* with 15 l. of H₂O at 60.degree. for 5 hrs. followed by acidification to pH 2.0 with 2N H₂SO₄; the pptd. **gymnemic** acids were dissolved in EtOH and Me₂CO, and the insol. materials were eliminated. Solvents were evapd. and the residue was extd. with diethyl carbonate. **Gymnemic** acid A was cryst. from the solvent. Elution with 95% EtOH from a DEAE-Sephadex column and further purification by thin-layer chromatog. gave 1.5 g. of I, m. 215.degree. (decompn.). Diazomethane in Et₂O treatment of 20 mg. of I and recrystn. from diethyl carbonate gave the Me ester of I, m. 205.degree. (decompn.). I was converted into II by treating 0.5 g. of I with 0.5 g. of KHCO₃ in 18 ml. H₂O and 3ml. EtOH, evapn. under reduced pressure, acidification of the residue to pH 7.5, and eluting the ppt. with 95% EtOH from a DEAE-Sephadex column. Recrystn. from diethyl carbonate gave II, m. 205.degree. (decompn.). I was converted into III, m. 205.degree. (decompn.), by refluxing 0.4 g. of I with 100 ml. of 3% KOH in MeOH, evapn., acidification of the ppt., and elution from the column, followed by recrystn. from diethyl carbonate. The ester group in the genin apparently has an important role in the manifestation of the antisweet activity of I.
- L2 ANSWER 18 OF 24 CAPLUS COPYRIGHT 2002 ACS
AN 1967:95358 CAPLUS
DN 66:95358
TI Glycosides and aglycons. CCLXXXIX. Gymne magenin, possible structure
AU Stoecklin, W.

CS Univ. Basel, Basel, Switz.
SO Helv. Chim. Acta (1967), 50(2), 491-503
CODEN: HCACAV
DT Journal
LA German
GI For diagram(s), see printed CA Issue.
AB cf. preceding abstr. The structure (most probably one of structures Ia-Id) of gymnemagenin (I), the aglycone obtained from **gymnemic** acid by fermentative degradation and alk. hydrolysis was investigated by mass and proton resonance spectroscopy. It was probably a new hexahydroxytriterpene with a structure 3.beta.,15.alpha.(or 16.beta.),21.beta.,22.alpha.,23,28- or 3.beta.,15.alpha.,16.beta.,21.beta. (or 22.alpha.),23,28-hexahydroxyolean-12-ene. Several I **derivs.** were prep'd. Hexa-O-acetylgygnemagenin, m. 290-1.degree., oxidized with CrO₃ in AcOH gave hexa-O-acetyl-11-oxogymnemagenin, m. 315.5-16.degree., [.alpha.]D 41.5.degree. (c 0.34, CHCl₃). I (85.4 g.) in 85 ml. Me₂CO was shaken with 500 mg. CuSO₄ for 10 days, and processed as usual to give 52.8 mg. di-O-isopropylidene-gymnemagenin, m. 280-1.degree., [.alpha.]D 32.7.degree. (c 1.1, CHCl₃), and 9 mg. mono-O-isopropylidene-gymnemagenin, m. 276-81.degree.. Also prep'd. was tetra-O-acetylmono-O-isopropylidene-gymnemagenin, m. 305-6.degree..

L2 ANSWER 19 OF 24 IPA COPYRIGHT 2002 ASHP

AN 96:4707 IPA
DN 33-14950
TI New hypoglycemic constituents in **gymnemic** acid from *Gymnema sylvestre*
AU Murakami, N.; Murakami, T.; Kadoya, M.; Matsuda, H.; Yoshikawa, M.; et al
CS Kyoto Pharm. Univ., 5 Nakauchi-cho, Misasagi, Yamashina-ku, Kyoto, 607 Japan
SO Chemical and Pharmaceutical Bulletin (Japan), (Feb 1996) Vol. 44, pp. 469-471. 5 Refs.
CODEN: CPBTAL; ISSN: 0009-2363.
DT Journal
LA English
AB The hypoglycemic activity of major saponin constituents from **gymnemic** acid, a crude saponin fraction from the leaves of *Gymnema sylvestre*, was investigated. Two new saponins as well as a **gymnemic** acid **derivative** were shown to exhibit hypoglycemic activity.
M. Therese Gyi

L2 ANSWER 20 OF 24 JICST-EPlus COPYRIGHT 2002 JST

AN 920597737 JICST-EPlus
TI Antisweet Natural Products. V. Structures of **Gymnemic** Acids VIII-XII from *Gymnema sylvestre* R. BR.
AU YOSHIKAWA K; NAKAGAWA M; YAMAMOTO R; ARIHARA S
MATSUURA K
CS Tokushima-Bunri Univ., Tokushima, JPN
Teikoku Seiyaku Co., Kagawa, JPN
SO Chem Pharm Bull, (1992) vol. 40, no. 7, pp. 1779-1782. Journal Code: G0504A (Tbl. 3, Ref. 7)
CODEN: CPBTAL; ISSN: 0009-2363
CY Japan
DT Journal; Article
LA English
STA New
AB Five oleanane-type triterpenoid saponins, **gymnemic** acids VIII-XII as antisweet principles were isolated from the leaves of *Gymnema sylvestre* (Asclepiadaceae). Their structures were established on the basis of spectral and chemical evidence. They were characterized as glucosideuronic acid **derivatives** of gymnemagenin acylated with acetyl, tigloyl and/or 2-methylbutyroyl moieties. (author abst.)

L2 ANSWER 21 OF 24 JICST-EPlus COPYRIGHT 2002 JST
AN 920532497 JICST-EPlus
TI Isolation and Structure Elucidation of **Gymnemic** Acids, Antisweet Principles of *Gymnema sylvestre*.
AU LIU H-M; KIUCHI F; TSUDA Y
CS Kanazawa Univ., Kanazawa, JPN
SO Chem Pharm Bull, (1992) vol. 40, no. 6, pp. 1366-1375. Journal Code: G0504A (Fig. 4, Tbl. 5, Ref. 27)
CODEN: CPBTAL; ISSN: 0009-2363
CY Japan
DT Journal; Article
LA English
STA New
AB The structure of gymnemagenin (3.BETA.,16.BETA.,21.BETA.,22.ALPHA.,23,28-hexahydroxy-olean-12-ene), the sapogenin of the antisweet principles of *Gymnema sylvestre*, was established by X-ray analysis of the 3.BETA.,23;21.BETA.,22.ALPHA.-di-O-isopropylidene derivative. On the basis of this result, the structure of deacylgymnemic acid was elucidated as the 3-O-.BETA.-glucuronide from the carbon-13 nuclear magnetic resonance spectra. Five antisweet principles, **gymnemic** acid-III, -IV, -V, -VIII, and -IX, were isolated in pure states from the hot water extract of leaves of *Gymnema sylvestre*. Of these, three (GA-III, -IV, and -V) were known, while two (GA-VIII and -IX) were new compounds. The structures of GA-VIII and -IX were elucidated as 3'-O-.BETA.-D-arabino-2-hexulopyranosyl **gymnemic** acid-III and -IV, respectively.
(author abst.)

L2 ANSWER 22 OF 24 JICST-EPlus COPYRIGHT 2002 JST
AN 920292559 JICST-EPlus
TI Specific taste sensitivity of single chorda tympani fibers in chimpanzees.
AU NINOMIYA Y
HELLEKANT G
CS Asahi Univ. School of Dentistry, Gifu, JPN
Univ. Wisconsin, WI, USA
SO Aji to Nioi no Shinpojiumu Ronbunshu (Proceedings of the Japanese Symposium on Taste and Smell), (1991) vol. 25th, pp. 313-316. Journal Code: L0869A (Fig. 4, Ref. 8)
CY Japan
DT Conference; Article
LA English
STA New
AB Taste sensitivity in chimpanzees was studied by examining responses of single chorda tympani fibers to various taste stimuli. A measurement of the breadth of responsiveness (Entropy:H) to the 4 basic taste stimuli suggested that the specificity of single fibers of the chimpanzee is higher than in any other mammalian species reported. A cluster analysis demonstrated that 25 fibers sampled were classified into the following 5 fiber types: Na-, Na-K-, acid-, bitter- and sweet-type, according to their responsiveness to 23 different taste stimuli. The lingual treatment of amiloride and **gymnemic** acid suppressed NaCl and sweetener responses only in Na- and sweet-type fibers, respectively, but not those in other types of fibers. The observed high specificity of fibers and fiber-type-specific effects of amiloride and **gymnemic** acid suggest the possibility that at least Na- and sweet-type fibers selectively innervate taste cells possessing amiloride-sensitive salt receptors and **gymnemic** acid-sensitive sweet taste receptors and this possible selective synaptic connection between taste cells and nerve fibers may play an important role in the neural coding of taste qualities.
(author abst.)

L2 ANSWER 23 OF 24 SCISEARCH COPYRIGHT 2002 ISI (R)
AN 92:478770 SCISEARCH
GA The Genuine Article (R) Number: JH016

TI ANTISWEET NATURAL-PRODUCTS .5. STRUCTURES OF **GYMNEMIC ACIDS**
VIII-XII FROM GYMNEMA-SYLVESTRE R BR
AU YOSHIKAWA K (Reprint); NAKAGAWA M; YAMAMOTO R; ARIHARA S; MATSUURA K
CS TOKUSHIMA BUNRI UNIV, FAC PHARMACEUT SCI, TOKUSHIMA 770, JAPAN (Reprint);
TEIKOKU SEIYAKU CO, OUCHI, KAGAWA 76926, JAPAN
CYA JAPAN
SO CHEMICAL & PHARMACEUTICAL BULLETIN, (JUL 1992) Vol. 40, No. 7, pp.
1779-1782.
ISSN: 0009-2363.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 7
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB Five oleanane-type triterpenoid saponins, **gymnemic acids** VIII-XII as antisweet principles were isolated from the leaves of Gymnema sylvestre (Asclepiadaceae). Their structures were established on the basis of spectral and chemical evidence. They were characterized as glucosideuronic acid **derivatives** of gymnemagenin acylated with acetyl, tigloyl and/or 2-methylbutyroyl moieties.

L2 ANSWER 24 OF 24 SCISEARCH COPYRIGHT 2002 ISI (R)
AN 92:421303 SCISEARCH
GA The Genuine Article (R) Number: JC660
TI ISOLATION AND STRUCTURE ELUCIDATION OF **GYMNEMIC ACIDS**, ANTISWEET PRINCIPLES OF GYMNEMA-SYLVESTRE
AU LIU H M; KIUCHI F; TSUDA Y (Reprint)
CS KANAZAWA UNIV, FAC PHARMACEUT SCI, 13-1 TAKARA MACHI, KANAZAWA, ISHIKAWA 920, JAPAN
CYA JAPAN
SO CHEMICAL & PHARMACEUTICAL BULLETIN, (JUN 1992) Vol. 40, No. 6, pp.
1366-1375.
ISSN: 0009-2363.
DT Article; Journal
FS LIFE
LA ENGLISH
REC Reference Count: 33
ABSTRACT IS AVAILABLE IN THE ALL AND IALL FORMATS
AB The structure of gymnemagenin (3-beta,16-beta,21-beta,22-alpha,23,28-hexahydroxy-olean-12-ene), the sapogenin of the antisweet principles of Gymnema sylvestre, was established by X-ray analysis of the 3-beta,23;21-beta,22-alpha-di-O-isopropylidene **derivative**. On the basis of this result, the structure of deacylgymnemic acid was elucidated as the 3-O-beta-glucuronide from the carbon-13 nuclear magnetic resonance spectra.
Five antisweet principles, **gymnemic acid-III**, -IV, -V, -VIII, and -IX, were isolated in pure states from the hot water extract of leaves of Gymnema sylvestre. Of these, three (GA-III, -IV, and -V) were known, while two (GA-VIII and -IX) were new compounds. The structures of GA-VIII and -IX were elucidated as 3'-O-beta-D-arabino-2-hexulopyranosyl **gymnemic acid-III** and -IV, respectively.

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NEWS 23 Sep 03 JAPIO has been reloaded and enhanced
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Journal code: 100883448. ISSN: 1007-9327.

CY China
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200204
ED Entered STN: 20020410
Last Updated on STN: 20020419
Entered Medline: 20020418

AB AIM: To determine whether diabetic care can be improved by combination of voglibose and **gymnemic acid (GA)**, we compared the combinative and individual effects of voglibose and GA on maltose absorption in small intestine. METHODS: The small intestine 30 cm long from 2 cm caudal ward Treitz's ligament of Wistar rat was used as an *in situ* loop, which was randomly perfused in recircular mode with maltose (10mmol/L) with or without different dosages of voglibose and/or GA for an hour. To compare the time course, perfusion of 10 mmol/L maltose was repeated four times. Each time continued for 1 hour and separated by 30 minutes rinse. In the first time, lower dosages of GA (0.5g/L) and/or voglibose (2 micromol/L) were contained except control. RESULTS: Absorptive rate of maltose was the lowest in combinative group ($P<0.05$, ANOVA), for example, the inhibition rate was about 37% during the first hour when 0.5 g/L-GA and 2 micromol/L voglibose with 10 mmol/L maltose were perfused in the loop. The onset time was shortened to 30 minutes and the effective duration was prolonged to 4 hours with the combination; therefore the total amount of maltose absorption during the effective duration was inhibited more significantly than that in the individual administration ($P < 0.05$, U test of Mann Whitney). The effect of GA on absorptive barriers of the intestine played an important role in the combinative effects. CONCLUSION: There are augmented effects of voglibose and GA. The management of diabetes mellitus can be improved by employing the combination.

L2 ANSWER 2 OF 4 MEDLINE
AN 2002022151 MEDLINE
DN 21351746 PubMed ID: 11459125
TI Structure-activity relationships of triterpenoid **derivatives** extracted from *Gymnema inodorum* leaves on glucose absorption.
AU Shimizu K; Ozeki M; Iino A; Nakajyo S; Urakawa N; Atsushi M
CS Division of Veterinary Pharmacology, Nippon Veterinary and Animal Science University, Musashino-shi, Tokyo, Japan.
SO JAPANESE JOURNAL OF PHARMACOLOGY, (2001 Jun) 86 (2) 223-9.
Journal code: 2983305R. ISSN: 0021-5198.

CY Japan
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200112
ED Entered STN: 20020121
Last Updated on STN: 20020121
Entered Medline: 20011207

AB The leaves of *Gymnema inodorum* (GI) have been known to be effective for some diseases including diabetes mellitus, rheumatic arthritis and gout. The crude saponin mixtures extracted from GI leaves inhibited glucose absorption in the isolated intestinal tract and suppressed the increased blood glucose in rats. In this study, we examined the relationship between chemical structure and pharmacological activity of the four components from GI leave extracts (GiA-1, GiA-2, GiA-5 and GiA-7). These components were the **derivatives** of (3 β ,4 α ,16 β)-16,23,28-trihydroxyolean-12-en-3-yl-beta-D-glucopyranosiduroic acid. GiA-2, GiA-5 and GiA-7 that have suppressive effects on the high K⁺-induced contraction, an increase in deltaPD and the increased blood glucose level in the glucose tolerance test have -H at the 21st position and -CH₂OH at 4 β of aglycon. On the other hand, GiA-1 that does not have any effects on the three parameters mentioned above has -H at the 21st position and

-CH₃ at 4beta of aglycon. In conclusion, it is suggested that the inhibitory effect of triterpenoids in Gymnema leaves on glucose absorption from the intestinal tract relies on -CH₂OH at 4beta.

L2 ANSWER 3 OF 4 MEDLINE
AN 93008520 MEDLINE
DN 93008520 PubMed ID: 1327559
TI Isolation and structure elucidation of **gymnemic** acids, antisweet principles of *Gymnema sylvestre*.
AU Liu H M; Kiuchi F; Tsuda Y
CS Faculty of Pharmaceutical Sciences, Kanazawa University, Japan.
SO CHEMICAL AND PHARMACEUTICAL BULLETIN, (1992 Jun) 40 (6) 1366-75.
Journal code: 0377775. ISSN: 0009-2363.
CY Japan
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199211
ED Entered STN: 19930122
Last Updated on STN: 19930122
Entered Medline: 19921104
AB The structure of gymnemagenin (3 beta,16 beta,21 beta,22 alpha,23,28-hexahydroxy-olean-12-ene), the sapogenin of the antisweet principles of *Gymnema sylvestre*, was established by X-ray analysis of the 3 beta,23;21 beta,22 alpha-di-O-isopropylidene **derivative**. On the basis of this result, the structure of deacylgymnemic acid was elucidated as the 3-O-beta-glucuronide from the carbon-13 nuclear magnetic resonance spectra. Five antisweet principles, **gymnemic** acid-III, -IV, -V, -VIII, and -IX, were isolated in pure states from the hot water extract of leaves of *Gymnema sylvestre*. Of these, three (GA-III, -IV, and -V) were known, while two (GA-VIII and -IX) were new compounds. The structures of GA-VIII and -IX were elucidated as 3'-O-beta-D-arabino-2-hexulopyranosyl **gymnemic** acid-III and -IV, respectively.

L2 ANSWER 4 OF 4 MEDLINE
AN 69228315 MEDLINE
DN 69228315 PubMed ID: 5791706
TI Antisweet activity of **gymnemic** acid A1 and its **derivatives**.
AU Kurihara Y
SO LIFE SCIENCES, (1969 May 1) 8 (9) 537-43. ←
Journal code: 0375521. ISSN: 0024-3205.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 196908
ED Entered STN: 19900101
Last Updated on STN: 19900101
Entered Medline: 19690821

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L3 2 L1 AND L2

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L3 ANSWER 1 OF 2 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1993:9179 BIOSIS
DN PREV199395009179
TI Antisweet natural products: V. Structures of **gymnemic** acids VIII-XII from *Gymnema sylvester* R. Br.
AU Yoshikawa, Kazuko (1); Nakagawa, Miki; Yamamoto, Ryouko; Arihara, Shigenobu; Matsuura, Kouji
CS (1) Fac. Pharmaceutical Sci., Tokushima-Bunri Univ., Tokushima-shi, Tokushima 770 Japan
SO Chemical & Pharmaceutical Bulletin (Tokyo), (1992) Vol. 40, No. 7, pp. 1779-1782.
ISSN: 0009-2363.
DT Article
LA English
AB Five oleanane-type triterpenoid saponins, **gymnemic** acids VII-XII as antisweet principles were isolated from the leaves of *Gymnema sylvestre* (Asclepiadaceae). Their structures were established on the basis of spectral and chemical evidence. They were characterized as glucosideuronic acid **derivatives** of gymnemagenin acylated with acetyl, tigloyl and/or 2-methylbutyroyl moieties.

L3 ANSWER 2 OF 2 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
AN 1992:459407 BIOSIS
DN BA94:100807
TI ISOLATION AND STRUCTURE ELUCIDATION OF **GYMNEMIC** ACIDS ANTISWEET PRINCIPLES OF *GYMNEMA-SYLVESTRE*.
AU LIU H-M; KIUCHI F; TSUDA Y
CS FACULTY PHARMACEUTICAL SCIENCES, KANAZAWA UNIVERSITY, 13-1 TAKARA-MACHI, KANAZAWA 920, JPN.
SO CHEM PHARM BULL (TOKYO), (1992) 40 (6), 1366-1375.
CODEN: CPBTAL. ISSN: 0009-2363.
FS BA; OLD
LA English
AB The structure of gymnemagenin (3. β .,16. β .,21. β .,22. α .,23,28-hexahydroxy-olean-12-ene), the sapogenin of the antisweet principles of *Gymnema sylvestre*, was established by X-ray analysis of the 3. β .,23;21. β .,22. α .-di-O-isopropylidene **derivative**. On the basis of this result, the structure of deacylglymnemic acid was elucidated as the 3-O- β -glucuronide from the carbon-13 nuclear magnetic resonance spectra. Five antisweet principles, **gymnemic** acid-III, -IV, -V, -VIII, and -IX, were isolated in pure states from the hot water extract of leaves of *Gymnema sylvestre*. Of these, three (GA-III, -IV, and -V) were known, while two (GA-VIII and -IX) were new compounds. The structures of GA-VIII and -IX were elucidated as 3'-O- β -D-arabinopyranosyl **gymnemic** acid-III and -IV, respectively.

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L4 10 L1 AND L2

=> dis 14 1-10 bib abs

L4 ANSWER 1 OF 10 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 2001161129 EMBASE
TI Caloric restriction in primates and relevance to humans.
AU Roth G.S.; Ingram D.K.; Lane M.A.
CS Dr. G.S. Roth, Laboratory of Neurosciences, Gerontology Research Center,
National Institutes of Health, 5600 Nathan Shock Drive, Baltimore, MD
21224, United States. geor@vax.grc.nia.nih.gov
SO Annals of the New York Academy of Sciences, (2001) 928/- (305-315).
Refs: 18
ISSN: 0077-8923 CODEN: ANYAA
CY United States
DT Journal; Conference Article
FS 003 Endocrinology
020 Gerontology and Geriatrics
029 Clinical Biochemistry
030 Pharmacology
037 Drug Literature Index
LA English
SL English
AB Dietary caloric restriction (CR) is the only intervention conclusively and reproducibly shown to slow aging and maintain health and vitality in mammals. Although this paradigm has been known for over 60 years, its precise biological mechanisms and applicability to humans remain unknown. We began addressing the latter question in 1987 with the first controlled study of CR in primates (rhesus and squirrel monkeys, which are evolutionarily much closer to humans than the rodents most frequently employed in CR studies). To date, our results strongly suggest that the same beneficial "antiaging" and/or "antidisease" effects observed in CR rodents also occur in primates. These include Lower plasma insulin levels and greater sensitivity; lower body temperatures; reduced cholesterol, triglycerides, blood pressure, and arterial stiffness; elevated HDL; and slower age-related decline in circulating levels of DHEAS. Collectively, these biomarkers suggest that CR primates will be less likely to incur diabetes, cardiovascular problems, and other age-related diseases and may in fact be aging more slowly than fully fed counterparts. Despite these very encouraging results, it is unlikely that most humans would be willing to maintain a 30% reduced diet for the bulk of their adult life span, even if it meant more healthy years. For this reason, we have begun to explore CR mimetics, agents that might elicit the same beneficial effects as CR, without the necessity of dieting. Our initial studies have focused on 2-deoxyglucose (2DG), a sugar analogue with a limited metabolism that

actually reduces glucose/energy flux without decreasing food intake in rats. In a six-month pilot study, 2DG lowered plasma insulin and body temperature in a manner analogous to that of CR. Thus, metabolic effects that mediate the CR mechanism can be attained pharmacologically. Doses were titrated to eliminate toxicity; a long-term longevity study is now under way. In addition, data from other laboratories suggest that at least some of the same physiological/metabolic end points that are associated with the beneficial effects of underfeeding may be obtained from other potential CR mimetic agents, some naturally occurring in food products. Much work remains to be done, but taken together, our successful results with CR in primates and 2DG administration to rats suggest that it may indeed be possible to obtain the health- and longevity-promoting effects of the former intervention without actually decreasing food intake.

L4 ANSWER 2 OF 10 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 2001125610 EMBASE
TI Chemistry and medicinal uses of *Gymnema sylvestre* (GUR-MAR) leaves - A review.
AU Agarwal S.K.; Singh S.S.; Verma S.; Lakshmi V.; Sharma A.; Kumar S.
CS S.K. Agarwal, Ctrl. Inst. of Med. and Arom. Plants, P.O. - CIMAP, Lucknow 226 015, India
SO Indian Drugs, (2000) 37/8 (354-360).
Refs: 41
ISSN: 0019-462X CODEN: INDRBA
CY India
DT Journal; General Review
FS 030 Pharmacology
003 Endocrinology
037 Drug Literature Index
013 Dermatology and Venereology
004 Microbiology
LA English
SL English
AB Gurmar (*Gymnema sylvestre* R.Br.) leaves find use as anti-sweetening and anti-diabetic agent in ayurvedic preparations. This review presents a survey of the literature on chemical composition, their isolation, estimation and uses of Gur-mar leaves with special reference to bioactive saponin **gymnemic** acids. Other notable biological activities reported are its stomachic, stimulant, laxative, diuretic and antieurodonic, anti-viral actions.

L4 ANSWER 3 OF 10 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 2000429115 EMBASE
TI Antihyperglycemic effects of **gymnemic** acid IV, a compound derived from *Gymnema sylvestre* leaves in streptozotocin-diabetic mice.
AU Sugihara Y.; Nojima H.; Matsuda H.; Murakami T.; Yoshikawa M.; Kimura I.
CS I. Kimura, Department of Chemical Pharmacology, Toyama Med. and Pharmaceutical Univ., 2630 Sugitani, Toyama 930-0194, Japan.
ikukokim@ms.toyama-mpu.ac.jp
SO Journal of Asian Natural Products Research, (2000) 2/4 (321-327).
Refs: 16
ISSN: 1028-6020 CODEN: JANRFI
CY United Kingdom
DT Journal; Article
FS 003 Endocrinology
030 Pharmacology
037 Drug Literature Index
LA English
SL English
AB We investigated the antihyperglycemic action of a crude saponin fraction and five triterpene glycosides (**gymnemic** acids I-IV and *gymnemasaponin* V) derived from the methanol extract of leaves of *Gymnema sylvestre* R. BR. (Asclepiadaceae) in streptozotocin (STZ)-diabetic mice. The saponin fraction (60 mg/kg) reduced blood glucose levels 2-4 h after

the intraperitoneal administration. **Gymnemic** acid IV, not the other 4 glycosides at doses of 3.4-13.4mg/kg reduced the blood glucose levels by 13.5-60.0% 6h after the administration comparable to the potency of glibenclamide, and did not change the blood glucose levels of normal mice. **Gymnemic** acid IV at 13.4mg/kg increased plasma insulin levels in STZ-diabetic mice. **Gymnemic** acid IV (1 mg/mL) did not inhibit .alpha.-glycosidase activity in the brush border membrane vesicles of normal rat small intestines. These results indicate that insulin-releasing action of **gymnemic** acid IV may contribute to the antihyperglycemic effect by the leaves of *G. sylvestre*. **Gymnemic** acid IV may be an anti-obese and antihyperglycemic pro-drug.

- L4 ANSWER 4 OF 10 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 1999156265 EMBASE
TI Gymnema sylvestre.
SO Alternative Medicine Review, (1999) 4/1 (46-47).
Refs: 12
ISSN: 1089-5159 CODEN: ALMRFP
CY United States
DT Journal; Article
FS 006 Internal Medicine
030 Pharmacology
037 Drug Literature Index
039 Pharmacy
LA English
- L4 ANSWER 5 OF 10 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 1999139213 EMBASE
TI Modulation of sweet taste.
AU Birch G.G.
CS G.G. Birch, Dept. of Food Science and Technology, University of Reading, P.O. Box 226, Reading RG6 6AP, United Kingdom
SO BioFactors, (1999) 9/1 (73-80).
Refs: 29
ISSN: 0951-6433 CODEN: BIFAEU
CY Netherlands
DT Journal; General Review
FS 002 Physiology
029 Clinical Biochemistry
LA English
- L4 ANSWER 6 OF 10 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 1998032926 EMBASE
TI Medicinal foodstuffs. X. Structures of new triterpene glycosides, gymnemosides-c, -d, -e, and -f, from the leaves of *Gymnema sylvestre* R. BR.: Influence of *gymnema* glycosides on glucose uptake in rat small intestinal fragments.
AU Yoshikawa M.; Murakami T.; Matsuda H.
CS M. Yoshikawa, Kyoto Pharmaceutical University, 5 Nakauchi-cho, Misasagi, Yamashina-ku, Kyoto 607, Japan
SO Chemical and Pharmaceutical Bulletin, (1997) 45/12 (2034-2038).
Refs: 11
ISSN: 0009-2363 CODEN: CPBTAL
CY Japan
DT Journal; Article
FS 030 Pharmacology
037 Drug Literature Index
LA English
SL English
AB Following the characterization of gymnemosides-a and -b, new triterpene glycosides, gymnemosides-c, -d, -e, and -f, were isolated from the leaves of *Gymnema* (*G.*) *sylvestre* R. BR. Their chemical structures were elucidated on the basis of chemical and physicochemical evidence as follows:

21-O-benzoyl- 28-O-acetylgygnemagenin 3-O-.beta.-D-glucopyranosiduronic acid (gymnemoside-c), 23-O- [.beta.-D-xylopyranosyl (1.fwdarw.6)- .beta.-D-glucopyranosyl (1.fwdarw.6)- .beta.-D- glucopyranosyl] gymnestrogenin (gymnemoside-d), 23-O- [.beta.-D-xylopyranosyl (1.fwdarw.6)- .beta.-D- glucopyranosyl (1.fwdarw.6)- .beta.-D- glucopyranosyl] 28-O- [.beta.-D- glucopyranosyl (1.fwdarw.6)- .beta.-D- glucopyranosyl] 23-hydroxylongispinogenin (gymnemoside-e), 23-O- [.beta.-D-xylopyranosyl (1.fwdarw.6)- .beta.-D-glucopyranosyl (1.fwdarw.6)- .beta.-D- glucopyranosyl] 28-O- [.beta.-D-xylopyranosyl (1.fwdarw.6)- .beta.-D- glucopyranosyl] 3.β.,16.β.,23,28-tetrahydroxyolean-18-ene (gymnemoside-f). The inhibitory effects of gymnemosides-c, -d, -e, and -f and principal triterpene glycosides from *G. sylvestre* on glucose uptake in rat small intestinal fragments were examined, and **gymnemic acids** II, III, and IV, gymnemasaponin V, and gymnemoside-f were found to exhibit the inhibitory activity.

L4 ANSWER 7 OF 10 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 96091656 EMBASE
DN 1996091656
TI New hypoglycemic constituents in '**gymnemic acid**' from *Gymnema sylvestre*.
AU Murakami N.; Murakami T.; Kadoya M.; Matsuda H.; Yamahara J.; Yoshikawa M.
CS Kyoto Pharmaceutical University, 5 Nakauchi-cho, Misasagi, Yamashina-ku,
Kyoto 607, Japan
SO Chemical and Pharmaceutical Bulletin, (1996) 44/2 (469-471).
ISSN: 0009-2363 CODEN: CPBTAL
CY Japan
DT Journal; Article
FS 030 Pharmacology
037 Drug Literature Index
LA English
SL English
AB Investigation of hypoglycemic activity of major saponin constituents from '**gymnemic acid**', a crude saponin fraction of *G. sylvestre*, exposed not only two new saponins, gymnemosides a (1) and b (2), but also gymnemoside b and **gymnemic acid** V (7) as active principles. Furthermore, an acetyl group linked 16- or 22-hydroxy group in 1 and 2 was found to migrate easily to primary 28- hydroxyl group, while acyl migration from 28-hydroxy group in 3 was little observed.

L4 ANSWER 8 OF 10 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 92275411 EMBASE
DN 1992275411
TI Antisweet natural products. V. Structures of **gymnemic acids** VIII-XII from *Gymnema sylvestre* R. Br..
AU Yoshikawa K.; Nakagawa M.; Yamamoto R.; Arihara S.; Matsuura K.
CS Faculty of Pharmaceutical Sciences, Tokushima-Bunri University, Tokushima-shi 770, Japan
SO Chemical and Pharmaceutical Bulletin, (1992) 40/7 (1779-1782).
ISSN: 0009-2363 CODEN: CPBTAL
CY Japan
DT Journal; Article
FS 029 Clinical Biochemistry
037 Drug Literature Index
LA English
SL English
AB Five oleanane-type triterpenoid saponins, **gymnemic acids** VIII-XII as antisweet principles were isolated from hbe leaves of *Gymnema sylvestre* (Asclepiadaceae). Their structures were established on the basis of spectral and chemical evidence. They were characterized as glucosideuronic acid **derivatives** of gymnemagenin acylated with acetyl, tigloyl and/or 2-methylbutyroyl moieties.

L4 ANSWER 9 OF 10 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.

AN 92250321 EMBASE
DN 1992250321
TI Isolation and structure elucidation of **gymnemic** acids, antisweet principles of *Gymnema sylvestre*.
AU Liu H.-M.; Kiuchi F.; Tsuda Y.
CS Faculty of Pharmaceutical Sciences, Kanazawa University, 13-1 Takara-machi, Kanazawa 920, Japan
SO Chemical and Pharmaceutical Bulletin, (1992) 40/6 (1366-1375).
ISSN: 0009-2363 CODEN: CPBTAL
CY Japan
DT Journal; Article
FS 037 Drug Literature Index
LA English
SL English
AB The structure of gymnemagenin (3. β .,16. β .,21. β .,22. α .,23,28-hexahydroxy-olean-12-ene), the sapogenin of the antisweet principles of *Gymnema sylvestre*, was established by X-ray analysis of the 3. β .,23;21. β .,22. α .-di-O-isopropylidene **derivative**. On the basis of this result, the structure of deacylgymnemic acid was elucidated as the 3-O-. β .-glucuronide from the carbon-13 nuclear magnetic resonance spectra. Five antisweet principles, **gymnemic** acid-III, -IV, -V, -VIII, and -IX, were isolated in pure states from the hot water extract of leaves of *Gymnema sylvestre*. Of these, three (GA-III, -IV, and -V) were known, while two (GA-VIII and -IX) were new compounds. The structures of GA-VIII and -IX were elucidated as 3'-O-. β .-D-arabino-2-hexulopyranosyl **gymnemic** acid-III and -IV, respectively.

L4 ANSWER 10 OF 10 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
AN 83192216 EMBASE
DN 1983192216
TI Chemotherapy of influenza.
AU Esanu V.
CS Stefan S. Nicolau Inst. Virol., 79650 Bucharest, Romania
SO Revue Roumaine de Medecine - Serie de Virologie, (1982) 33/4 (283-302).
CODEN: RRMVDQ
CY Romania
DT Journal
FS 047 Virology
037 Drug Literature Index
030 Pharmacology
LA English
SL French

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NEWS 6 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 7 Apr 22 BIOSIS Gene Names now available in TOXCENTER
NEWS 8 Apr 22 Federal Research in Progress (FEDRIP) now available
NEWS 9 Jun 03 New e-mail delivery for search results now available
NEWS 10 Jun 10 MEDLINE Reload
NEWS 11 Jun 10 PCTFULL has been reloaded
NEWS 12 Jul 02 FOREGE no longer contains STANDARDS file segment
NEWS 13 Jul 22 USAN to be reloaded July 28, 2002;
saved answer sets no longer valid
NEWS 14 Jul 29 Enhanced polymer searching in REGISTRY
NEWS 15 Jul 30 NETFIRST to be removed from STN
NEWS 16 Aug 08 CANCERLIT reload
NEWS 17 Aug 08 PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18 Aug 08 NTIS has been reloaded and enhanced
NEWS 19 Aug 19 Aquatic Toxicity Information Retrieval (AQUIRE)
now available on STN
NEWS 20 Aug 19 IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS 21 Aug 19 The MEDLINE file segment of TOXCENTER has been reloaded
NEWS 22 Aug 26 Sequence searching in REGISTRY enhanced
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NEWS 26 Sep 16 CA Section Thesaurus available in CAPLUS and CA
NEWS 27 Oct 01 CASREACT Enriched with Reactions from 1907 to 1985
NEWS 28 Oct 21 EVENTLINE has been reloaded
NEWS 29 Oct 24 BEILSTEIN adds new search fields
NEWS 30 Oct 24 Nutraceuticals International (NUTRACEUT) now available on STN
NEWS 31 Oct 25 MEDLINE SDI run of October 8, 2002 on STN

NEWS EXPRESS October 14 CURRENT WINDOWS VERSION IS V6.01,
CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP),
AND CURRENT DISCOVER FILE IS DATED 01 OCTOBER 2002
NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

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of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

* *

FILE 'HOME' ENTERED AT 13:31:53 ON 30 OCT 2002

=> file reg		SINCE FILE	TOTAL
COST IN U.S. DOLLARS		ENTRY	SESSION
FULL ESTIMATED COST		0.21	0.21

FILE 'REGISTRY' ENTERED AT 13:32:03 ON 30 OCT 2002
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STRUCTURE FILE UPDATES: 29 OCT 2002 HIGHEST RN 467418-81-1
DICTIONARY FILE UPDATES: 29 OCT 2002 HIGHEST RN 467418-81-1

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when conducting SmartSELECT searches.

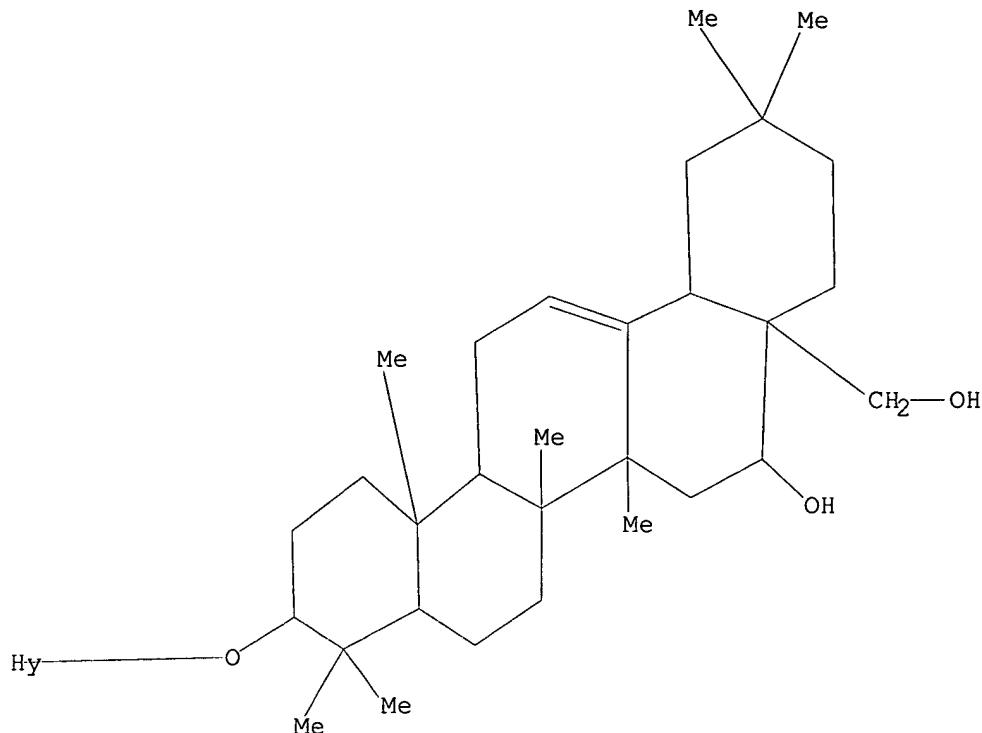
Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP PROPERTIES for more information. See STNote 27, Searching Properties in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=>
Uploading 09913322-1.str

L1 STRUCTURE uploaded

=> d 11
L1 HAS NO ANSWERS
L1 STR



Structure attributes must be viewed using STN Express query preparation.

=> s 11 sss sam

SAMPLE SEARCH INITIATED 13:32:51 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 481 TO ITERATE

100.0% PROCESSED 481 ITERATIONS
SEARCH TIME: 00.00.02

0 ANSWERS

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**

PROJECTED ITERATIONS: 8305 TO 10935
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA SSS SAM L1

=> s 11 sss full

FULL SEARCH INITIATED 13:33:17 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 9459 TO ITERATE

100.0% PROCESSED 9459 ITERATIONS
SEARCH TIME: 00.00.03

0 ANSWERS

L3 0 SEA SSS FUL L1

Welcome to STN International! Enter x:x

LOGINID: ssspta1623kxg

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * * * * * Welcome to STN International * * * * * * * * * * *

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 Apr 08 "Ask CAS" for self-help around the clock
NEWS 3 Apr 09 BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 4 Apr 09 ZDB will be removed from STN
NEWS 5 Apr 19 US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS 6 Apr 22 Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 7 Apr 22 BIOSIS Gene Names now available in TOXCENTER
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* * * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 13:41:41 ON 30 OCT 2002

| | | | |
|----------------------|--|------------|---------|
| => file reg | | SINCE FILE | TOTAL |
| COST IN U.S. DOLLARS | | ENTRY | SESSION |
| FULL ESTIMATED COST | | 0.21 | 0.21 |

FILE 'REGISTRY' ENTERED AT 13:41:52 ON 30 OCT 2002
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STRUCTURE FILE UPDATES: 29 OCT 2002 HIGHEST RN 467418-81-1
DICTIONARY FILE UPDATES: 29 OCT 2002 HIGHEST RN 467418-81-1

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP
PROPERTIES for more information. See STNote 27, Searching Properties
in the CAS Registry File, for complete details:
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=>
Uploading 09913322-2.str

L1 STRUCTURE uploaded

=> d 11
L1 HAS NO ANSWERS
L1 STR

* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT *

Structure attributes must be viewed using STN Express query preparation.

=> s 11 exact sam
SAMPLE SEARCH INITIATED 13:42:50 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 0 TO ITERATE

100.0% PROCESSED 0 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.02

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 0 TO 0
PROJECTED ANSWERS: 0 TO 0

L2 0 SEA EXA SAM L1

=> s 11 sss sam

SAMPLE SEARCH INITIATED 13:43:01 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 308 TO ITERATE

100.0% PROCESSED 308 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
BATCH **COMPLETE**
PROJECTED ITERATIONS: 5108 TO 7212
PROJECTED ANSWERS: 0 TO 0

L3 0 SEA SSS SAM L1

=> s ll sss full
FULL SEARCH INITIATED 13:43:11 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 5977 TO ITERATE

100.0% PROCESSED 5977 ITERATIONS 0 ANSWERS
SEARCH TIME: 00.00.01

L4 0 SEA SSS FUL L1

=>

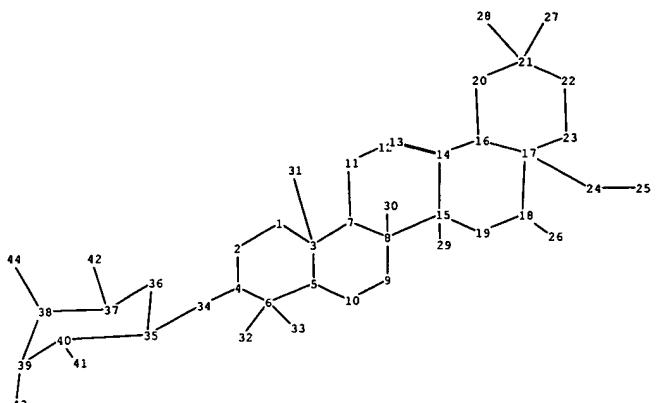
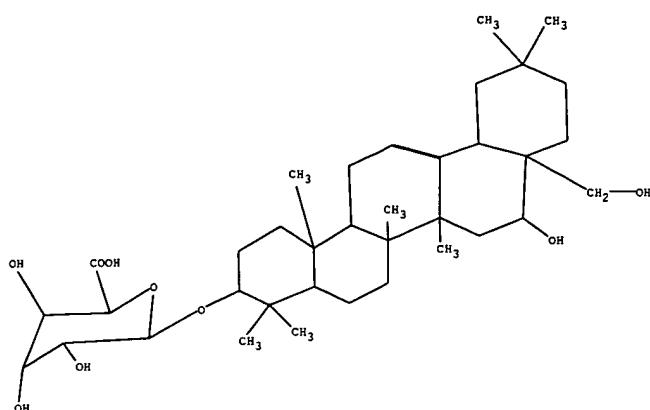
---Logging off of STN---

=>
Executing the logoff script...

=> LOG Y

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|----------------------|------------------|---------------|
| FULL ESTIMATED COST | 140.66 | 140.87 |

STN INTERNATIONAL LOGOFF AT 13:43:20 ON 30 OCT 2002



chain nodes :

24 25 26 27 28 29 30 31 32 33 34 41 42 43 44

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 35 36
37 38 39 40

chain bonds :

3-31 4-34 6-32 6-33 8-30 15-29 17-24 18-26 21-27 21-28 24-25 34-35 37-42
38-44 39-43 40-41

ring bonds :

1-2 1-3 2-4 3-5 3-7 4-6 5-6 5-10 7-8 7-11 8-9 8-15 9-10 11-12 12-13 13-14
14-15 14-16 15-19 16-17 16-20 17-18 17-23 18-19 20-21 21-22 22-23 35-36 35-40
36-37 37-38 38-39 39-40

exact/norm bonds :

1-2 1-3 2-4 3-5 3-7 4-6 4-34 5-6 5-10 7-8 7-11 8-9 8-15 9-10 11-12 12-13
13-14 14-15 14-16 15-19 16-17 16-20 17-18 17-23 18-19 18-26 20-21 21-22 22-23
34-35 35-36 35-40 36-37 37-38 38-39 38-44 39-40 39-43 40-41

exact bonds :

3-31 6-32 6-33 8-30 15-29 17-24 21-27 21-28 24-25 37-42

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom
12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:Atom 21:Atom
22:Atom 23:Atom 24:CLASS 25:CLASS 26:CLASS 27:CLASS 28:CLASS 29:CLASS 30:CLASS
31:CLASS 32:CLASS 33:CLASS 34:CLASS 35:Atom 36:Atom 37:Atom 38:Atom 39:Atom
40:Atom 41:CLASS 42:CLASS 43:CLASS 44:CLASS

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:ssspta1623kxg

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

* * * * * * * * * Welcome to STN International * * * * * * * * *

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NEWS 13 Jul 22 USAN to be reloaded July 28, 2002;
saved answer sets no longer valid
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NEWS 23 Sep 03 JAPIO has been reloaded and enhanced
NEWS 24 Sep 16 Experimental properties added to the REGISTRY file
NEWS 25 Sep 16 Indexing added to some pre-1967 records in CA/CAPLUS
NEWS 26 Sep 16 CA Section Thesaurus available in CAPLUS and CA
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NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

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FILE 'HOME' ENTERED AT 13:50:17 ON 30 OCT 2002

FILE 'REGISTRY' ENTERED AT 13:50:28 ON 30 OCT 2002
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STRUCTURE FILE UPDATES: 29 OCT 2002 HIGHEST RN 467418-81-1
DICTIONARY FILE UPDATES: 29 OCT 2002 HIGHEST RN 467418-81-1

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

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<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> Uploading 09913322-3.str

L1 STRUCTURE UPLOADED

```
=> d l1
L1 HAS NO ANSWERS
L1           STR
*** STRUCTURE DIAGRAM IS NOT AVAILABLE ***
```

Structure attributes must be viewed using STN Express query preparation.

```
=> s 11 sss sam
SAMPLE SEARCH INITIATED 13:51:16 FILE 'REGISTRY'
SAMPLE SCREEN SEARCH COMPLETED - 1004 TO ITERATE
```

99.6% PROCESSED 1000 ITERATIONS 0 ANSWERS
INCOMPLETE SEARCH (SYSTEM LIMIT EXCEEDED)
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE **COMPLETE**
PROJECTED ITERATIONS: 18180 TO 21980
PROJECTED ANSWERS: 0 TO 0
BATCH **COMPLETE**

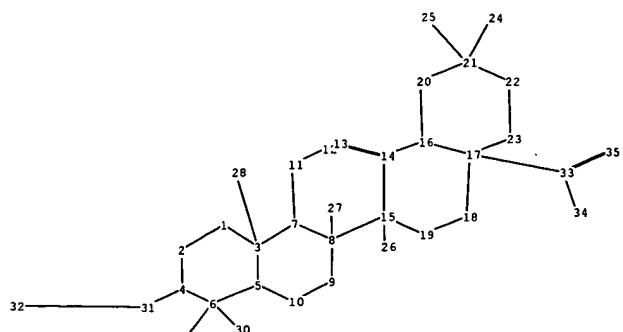
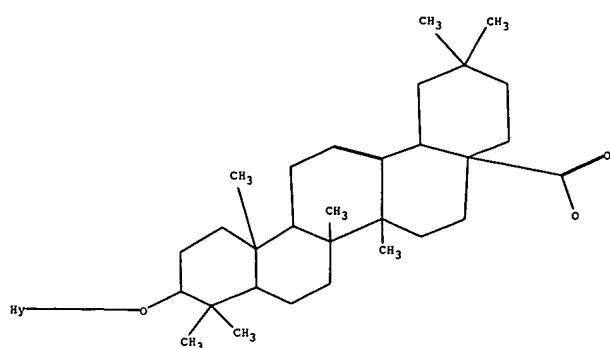
L2 0 SEA SSS SAM L1

=> s 11 sss full
FULL SEARCH INITIATED 13:51:35 FILE 'REGISTRY'
FULL SCREEN SEARCH COMPLETED - 19672 TO ITERATE

100.0% PROCESSED 19672 ITERATIONS
SEARCH TIME: 00.00.02

0 ANSWERS

L3 0 SEA SSS FUL L1



chain nodes :
 24 25 26 27 28 29 30 31 32 33 34 35
ring nodes :
 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
chain bonds :
 3-28 4-31 6-29 6-30 8-27 15-26 17-33 21-24 21-25 31-32 33-34 33-35
ring bonds :
 1-2 1-3 2-4 3-5 3-7 4-6 5-6 5-10 7-8 7-11 8-9 8-15 9-10 11-12 12-13 13-14
 14-15 14-16 15-19 16-17 16-20 17-18 17-23 18-19 20-21 21-22 22-23
exact/norm bonds :
 1-2 1-3 2-4 3-5 3-7 4-6 4-31 5-6 5-10 7-8 7-11 8-9 8-15 9-10 11-12 12-13
 13-14 14-15 14-16 15-19 16-17 16-20 17-18 17-23 18-19 20-21 21-22 22-23 31-32
 33-34 33-35
exact bonds :
 3-28 6-29 6-30 8-27 15-26 17-33 21-24 21-25

Match level :
 1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom 11:Atom
 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:Atom 18:Atom 19:Atom 20:Atom 21:Atom
 22:Atom 23:Atom 24:CLASS 25:CLASS 26:CLASS 27:CLASS 28:CLASS 29:CLASS 30:CLASS
 31:CLASS 32:Atom 33:CLASS 34:CLASS 35:CLASS

| L Number | Hits | Search Text | DB | Time stamp |
|----------|------|------------------------------------|---|------------------|
| 1 | 186 | 514/33 | USPAT;
US-PPGPUB;
EPO;
DERWENT | 2002/10/30 20:12 |
| 2 | 0 | 514/33 and gymnemic | USPAT;
US-PPGPUB;
EPO;
DERWENT | 2002/10/30 20:12 |
| 3 | 0 | 514/33 and gymnemoside | USPAT;
US-PPGPUB;
EPO;
DERWENT | 2002/10/30 20:13 |
| 4 | 66 | gymnemic | USPAT;
US-PPGPUB;
EPO;
DERWENT | 2002/10/30 20:13 |
| 6 | 38 | (gymnemic and acid) and derivative | USPAT;
US-PPGPUB;
EPO;
DERWENT | 2002/10/30 20:14 |
| 5 | 66 | gymnemic and acid | USPAT;
US-PPGPUB;
EPO;
DERWENT | 2002/10/30 20:23 |